DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

T00005NY
Revision No. 1
Bombardier Aerospace Inc.
BD-100-1A10
November 5, 2003

TYPE CERTIFICATE DATA SHEET NO. T00005NY

This data sheet which is part of Type Certificate No. T00005NY, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations (FAR).

Type Certificate Holder: **Bombardier Aerospace Inc**
400 Cote Vertu Road West
Dorval, Quebec
Canada H4S 1Y9

I - Model BD-100-1A10 Challenger 300, (Transport Category), Approved June 4, 2003 by the FAA and May 30, 2003, by Transport Canada Civil Aviation with Canadian type certificate number A-234

ENGINES — Two Honeywell AS907-1-1A, engine type certificate number E00010LA

FUEL

Type	Specifications		
	Canada	U.S.A.	U.K.
Jet A	CAN2-3.23	ASTM D1655	D. Eng RD2494
Jet A-1	CAN2-3.23	ASTM D1655	D. Eng RD2494

OIL — Engine, APU: Refer to Aircraft Maintenance Manual, Bombardier Publication BD 100 AMM, Chapter 12.

ENGINE LIMITS CONDITIONS

	SL Static Thrust (installed)		Fan RPM	Core RPM	ITT		Time Limit
	lbf	kN	N_1%	N_2%	°C	°F	
Max. Take - off	6 924	30.8	95.9	98.1	941	1 726	5 min*
Max. Continuous	6 910	30.7	95.0	97.2	923	1 693	-
Idle Range	-	-	-	46.0 min.	-	-	-
Reverse Thrust	-	-	70.7	-	-	-	-
Starting, on ground	-	-	N/A	N/A	650	1202	-
Starting, in air	-	-	N/A	N/A	700**	1292**	-

* The take off limit may be extended to 10 minutes for engine out contingency.
** Varies with N2 speed.

OIL TEMPERATURE

	°C	°F
Minimum for Starting (ground)	-40	-40
Minimum before accelerating above idle	N/A	N/A
Maximum Continuous	138	280
Maximum Permissible (transient, 2 minutes)	154	309

OIL PRESSURE

Take-off Power (minimum)	*
Steady State Idle (minimum)	28 psi

* Oil pressure is not regulated and pressure limits varies with N_2 speeds

APU

Honeywell 36-150[BD]

APU LIMITS

Maximum RPM:	110%	
Maximum EGT:	°C	°F
Starting	512-1024	954-1875
Running	594-714	1101-1317

AIRSPEED LIMITS (IAS)

V_{MO} and M_{MO} (Maximum Operating):	m.p.h.	knots	Mach
Sea Level to 8000 ft.	345	300	-
8001 ft. to 29475 ft.	368	320	-
Above 29475 ft.	-	-	0.83
V_{FE} 10°	242	210	-
20°	242	210	-
30°	201	175	-
V_D and M_D			
Sea Level to 25525 ft.	437	380	-
Above 25525 ft.	-	-	0.90
See Flight Manual for variation of V_a with altitude and aircraft weight			
V_{MCA} Flap 10°	122	106	-
Flap 20°	117	102	
V_{MCG}	128	111	-
$V_{LO (EXT)}$	288	250	-
$V_{LO (RET)}$	230	200	-
V_{LE}	288	250	-

C. G. RANGE

See Figure 1.0, Longitudinal C.G. Envelope
MRW=Maximum Ramp Weight
MTOW= Maximum Takeoff Weight
MLW=Maximum Landing Weight
MZFW=Maximum Zero Fuel Weight
MFW=Minimum Fuel Weight

DATUM

FS 0.0 located at 195 in. Fwd of the aircraft nose

MEAN AERO-DYNAMIC CHORD

112.2 in (MAC leading edge at fuselage station 556.67 in.)

LEVELING MEANS

Plumb bob and target in the aft equipment bay at FS 755.5 and RBL 1.0

MAXIMUM WEIGHTS

	lb.	kg.
Max. Taxi and Ramp	38 650	17 530
Max. Takeoff	38 500	17 460
Max. Landing	33 750	15 310
Max. Zero Fuel	26 100	11 840

MINIMUM CREW Two (Pilot and Co-pilot)

MAXIMUM OCCUPANTS 19 (including the crew and no more than 16 passengers)
See Note 4

FUEL CAPACITY

		Load		Weight**	
	Usable	U.S. Gal.	liters	lb.	kg
	2 main tanks (each)	1 048	3 967	7 074	3 205
	Total	2 096	7 941	14 162	6 417
*	Unusable (drainable)	3.7	14	25	11
*	Undrainable	1	3.8	7	3

* see NOTE 1b
** Assuming a fuel density of 6.75 lbs/U.S. Gal.

OIL CAPACITY

	Load		Weight	
	U.S. Qts.	liters	lb.	kg.
Left Engine	6.0	5.7	12.6	5.7
Right Engine	5.0	4.7	10.4	4.7
Total	11.0	10.4	23.0	10.4
Usable per Engine	1.7	1.6	3.5	1.6

MAX. OPERATING ALTITUDE
Take off and landing: 8 000 ft
En route: 45 000 ft

CONTROL SURFACE MOVEMENTS

Rudder	30° Left	30° Right
Horizontal Stabilizer	2° LE Up	12° LE Down
Aileron	18° TE Up	18° TE Down
Elevator	24° TE Up	18° TE Down
Ground spoilers	60° Up	-
Multi-function spoilers (Inboard to Outboard)	45 ° Up	-

TYPE CERTIFICATION APPLICATION DATE 28 June 1999

SERIAL NUMBERS ELIGIBLE 20002 and subsequent

SERVICE INFORMATION

Service Bulletins, structural repair manuals, vendor manuals, overhaul and maintenance manuals, and aircraft flight manuals which contain a statement that the document is Transport Canada approved or Transport Canada approved through the Manufacturers Design Approval Representative are accepted by the FAA and are considered FAA approved. (These approvals pertain to the design data only).

APPROVED PUBLICATIONS

(a) Airplane Flight Manual (AFM), Bombardier Publication CSP 100-1, dated May 30, 2003 and subsequent approved revisions.

(b) Drawing List, Bombardier Publication RAL-100-0001, Issue A and subsequent approved revisions.

(c) Time Limits/Maintenance Checks Manual, Bombardier Publication BD 100 TLMC and subsequent approved revisions contains the Certification Maintenance Tasks, Life Limited Parts and Damage Tolerant Inspections. See NOTE 3

(d) Structural Repair Manual (SRM), Bombardier Publication BD 100 SRM and subsequent approved revisions. See NOTE 3

IMPORT ELIGIBILITY

A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by the Minister of Transport. This form must contain the following statement:

"This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for the Transport Canada Type Certificate No. A-234 and includes the minimum type design defined in document RAZ-BA100-124 Issue A or subsequent approved revisions and RAL-100-0001 Issue A or subsequent approved revisions as being required to comply with the basis for the U.S. Type Certificate No. T00005NY, and is in a condition for safe operation. "

The approved type design appropriate to the "as delivered" configuration of a particular BD-100-1A10 airplane is defined in the document RAL-100-XXXX. (XXXX represents the Serial Number for the airplane concerned).

The U.S. airworthiness certification basis for aircraft type certificated under FAR 21.29 and exported by the country of manufacture is FAR 21.183(c) or FAR 21.185(c)

The U.S. airworthiness certification basis for aircraft type certificated under FAR 21.29 and exported from countries other than the country of manufacture (e.g. third party country) is FAR 21.183(d) or FAR 21.185(b)

The U.S. airworthiness certification basis for the issuance of an airworthiness certificate for aircraft type certificated under FAR 21.21 and manufactured in a foreign country under a licensing arrangement is FAR 21.183(d) or FAR 21.183(b)

The U.S. airworthiness certification basis for an aircraft originally type certificated under FAR 21.21 but transferred outside the U.S. is 21.183(d)

Additional guidance is contained in FAA AC 21-23A, or subsequent revision, Airworthiness Certification of Civil Aircraft, Engines, Propellers and Related Products Imported into the United States.

CERTIFICATION BASIS

FAR Part 25, including:
Amendments 25-1 through 25-101,
Amendment 25-103 and Amendment 25-105.

There are no exceptions.

Exemptions:

(1) Static testing requirements of FAR 25.1435(b)(1), Hydraulic System Proof Pressure Testing, Exemption No. 7508, Regulatory Docket No. FAA-2001-9034, issued April 18, 2001.

(2) General Occupant Protection of FAR 25.785(b), Multi-Place Side Facing Divans, Exemption No. 7884A, Regulatory Docket No. FAA-2002-11998, issued September 2, 2003.

Additional FAA Requirements:

(1) FAR Part 36 dated August 7, 2002,
as amended through Amendment 36-24 inclusive.

(2) Applicable portions of FAR 34 dated November 5, 2002,
as amended through Amendment 34-3 inclusive.

(3) Special Conditions:
High Intensity Radiated Fields (HIRF), Docket No. NM243, Special Condition No. 25-226-SC, effective date 1/9/2003.

Approach and Go-around use of Automatic Power Reserve, Docket No. NM255, Special Conditon No. 25-03-04-SC, effective date May 28, 2003

Limit Engine Torque Loads for Sudden Engine Stoppage, Docket No. NM245, Special Condition No. 25-229-SC, effective date March 6, 2003

Side Facing Single Occupancy Seats, Docket No. NM259, Special Condition No. 25-249-SC, effective October 6, 2003

Equivalent safety has been established for the following requirements:

(1) FAR 25.103 and several other FAR's for the use of 1-g stall speed and reduced reference speeds
(documented in Transport Airplane Directorate Equivalent Level of Safety (ELOS) Memo No. TC2500NY-T-F-1)

(2) FAR 25.933(a)(1)(ii) Capability of Continued Safe Flight and Landing under any possible position of the Thrust Reverser System (documented in Transport Airplane Directorate ELOS Memo No. TC2500NY-T-P-1)

(3) FAR 25.1203, FAR 25.1207 Engine Thrust Reverser Zone Fire Detection (documented in Transport Airplane Directorate ELOS Memo No. TC2500NY-T-P-3)

(4) FAR 25.177(c) Static lateral-directional stability, (documented in Transport Airplane Directorate (TAD) ELOS Memo No. TC2500NY-T-F-2)

Compliance with the following optional requirements has been established:

(1) Ditching provisions of FAR 25.801 when the safety equipment requirements of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied.

EQUIPMENT

The basic equipment as prescribed in the applicable airworthiness requirements (see Certification Basis) must be installed in the aircraft for certification.

NOTE 1

(a) A current weight and balance report including the list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

(b) System fuel, which must be included in the empty weight, is the amount of fuel required to fill the system plumbing and tanks to the undrainable level plus unusable fuel in the fuel tanks. The weight of undrainable and unsuable fuel defined in the Fuel Capacity section must be included in the empty weight of the airplane.

NOTE 2

All placards must be installed in accordance with Bombardier Drawings: 1001100001, 1001100002, 1001100003 and 1001100004.

NOTE 3

The airplane life limits and repetitive inspections for components and equipment and information essential for proper maintenance, are listed in Bombardier Publication BD 100 TLMC. These limitations may not be changed without FAA Engineering approval.

Instructions for Continued Airworthiness consist of the following Publications:

a) BD 100 AMM, Aircraft Maintenance Manual (Publication No. CH300 AMM)
b) BD100 TLMC, Time Limits/Maintenance Checks Manual (Publication No. CH300 TLMC)
c) BD 100 SRM, Structural Repair Manual (Publication No. CH300 SRM)
d) BD 100 NDT, Non-Destructive Testing Manual (Publication No. CH300 NDTM)
e) BD 100 JIC, Job Instruction Card Manual (Publication No. CH300 JICM)

NOTE 4

The green aircraft type design configuration does not include passenger provisions. Carriage of persons in the cabin is permitted when an approved seating arrangement and related required passenger provisions are incorporated in accordance with the Type Certificate Basis.

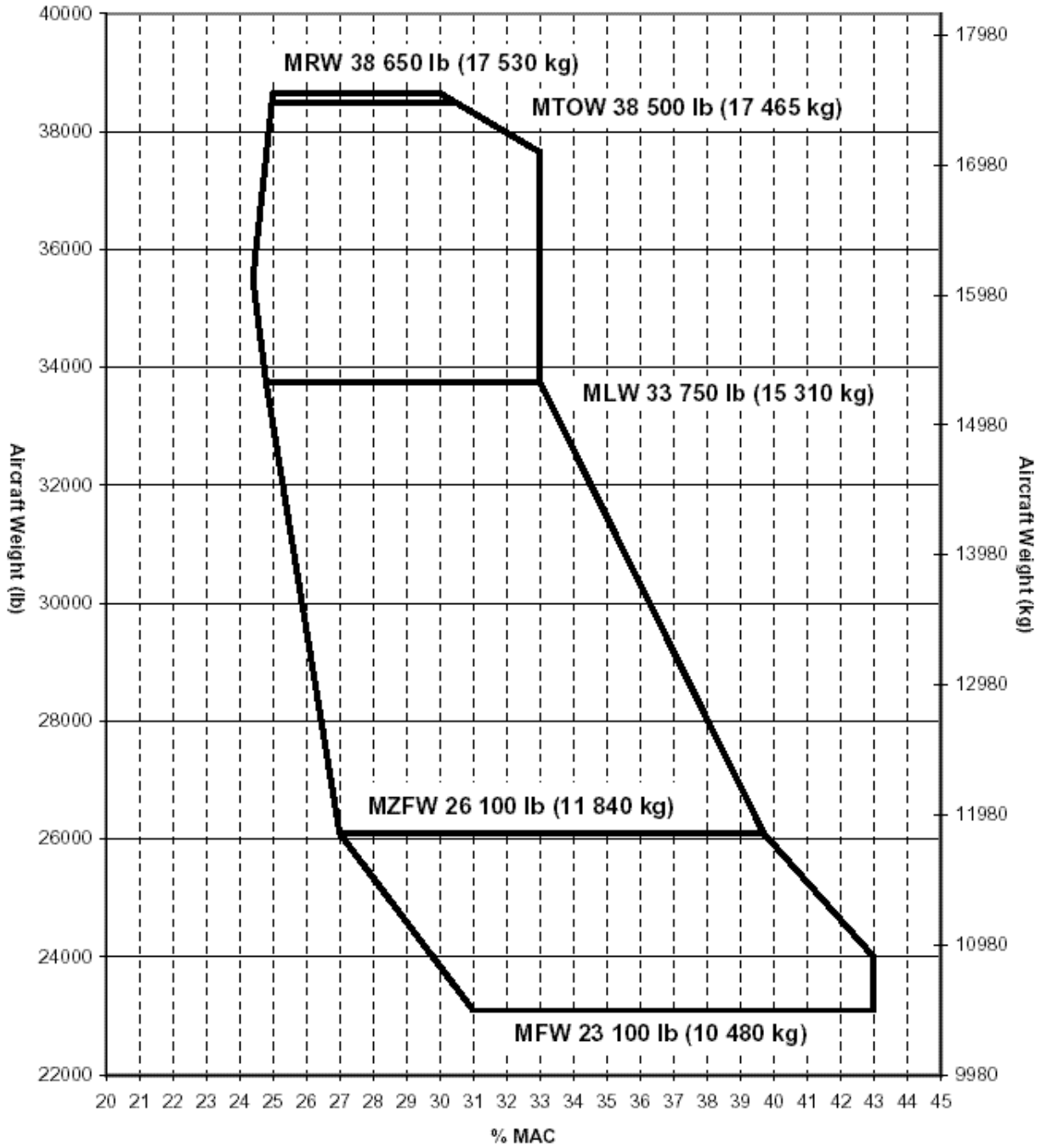
NOTE 5

Bombardier Aerospace report RAZ-BA-100 provides guidance to completion centers regarding compliance with the basis of certification for the BD-100-1A10 Challenger 300 with a completed interior.

NOTE 6

Compliance with FAR 25.105(c)(1) and 25.125(b), associated with Takeoff and Landing Performance on Unpaved Runways, has not been demonstrated.

Figure 1.0
LONGITUDINAL C.G. ENVELOPE



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